What is claimed is:

1. A capacitor discharge ignition device for an internal combustion engine comprises:

a magneto generator having an exciter coil that generates one-and-a-half cycle of an AC voltage constituted by a positive half cycle of an output voltage and first and second negative half cycles of output voltages generated before and after said positive half cycle of the output voltage, respectively, at least once during one rotation of a crankshaft;

an ignition coil;

an ignition capacitor that is charged with one polarity with the positive half cycle of the output voltage of said exciter coil;

a thyristor that is turned on when a trigger signal is provided to discharge charges stored in said ignition capacitor through a primary coil of said ignition coil;

a thyristor trigger circuit that provides a trigger signal to said thyristor at an ignition position in said internal combustion engine using the negative half cycle of the output voltage of said exciter coil as a power supply voltage; and

a trigger inhibiting circuit that inhibits said thyristor from being triggered when a current flowing from said exciter coil through said thyristor is detected and when a charging current of said ignition capacitor is detected.

2. The capacitor discharge ignition device for an internal combustion engine according to claim 1, wherein said trigger inhibiting circuit is comprised of a reverse bias circuit that applies a reverse bias voltage between a gate and a cathode of said thyristor when the current flowing from said exciter coil through said thyristor is detected and when the charging current of said ignition capacitor is detected.

3. The capacitor discharge ignition device for an internal combustion engine according to claim 1, further comprising a positive current feedback circuit provided between one end of said exciter coil and the ground in order to construct a return circuit of a current flowing out of said exciter coil when said exciter coil generates the positive half cycle of the output voltage, and a negative current feedback circuit provided between the other end of said exciter coil and the ground in order to construct a return circuit of a current flowing out of said exciter coil when said exciter coil generates the negative half cycle of the output voltage,

wherein said positive current feedback circuit is comprised of a first feedback diode connected between the gate and the cathode of said thyristor with its cathode directed to the gate of said thyristor, and a second feedback diode connected between the gate of said thyristor and one end of said exciter coil with its anode directed to the gate of said thyristor,

said negative current feedback circuit comprises a third feedback diode connected between the other end of said exciter coil and the ground with its anode directed to the ground, and

the reverse bias circuit is comprised of said first feedback diode, which applies the reverse bias voltage between the gate and the cathode of said thyristor when the current flowing from said exciter coil through said thyristor is detected and when the charging current of said ignition capacitor is detected, and said trigger inhibiting circuit is comprised of said reverse bias circuit.

4. The capacitor discharge ignition device for an internal combustion engine according to claim 1, wherein said thyristor trigger circuit is comprised so as to recognize a crank angle position corresponding to a specific

phase of the negative half cycle of the output voltage of said exciter coil as an ignition position of said internal combustion engine and provide a trigger signal to said thyristor when said ignition position is detected.

5. The capacitor discharge ignition device for an internal combustion engine according to claim 1, wherein said thyristor trigger circuit comprises: a trigger power supply capacitor that has one end grounded and the other end connected to one end of said exciter coil through a backflow inhibiting diode and a charging time constant adjusting resistor, and is charged with the negative half cycle of the output voltage generated by said exciter coil; a trigger controlling transistor whose collector is connected to an ungrounded terminal of said trigger power supply capacitor through a discharging resistor, whose emitter is grounded, and whose base is connected to one end of said exciter coil through a base resistor, and that is turned on when said exciter coil generates a negative half cycle of an output voltage higher than a threshold level; a differential capacitor that has one end connected to the ungrounded terminal of said trigger power supply capacitor through said discharging resistor; and a trigger signal providing diode whose anode is connected to the other end of said differential capacitor and whose cathode is connected to the gate of said thyristor, and is comprised so as to provide a trigger signal to said thyristor through said differential capacitor by charges remaining in said trigger power supply capacitor when the negative half cycle of the output voltage generated by said exciter coil peaks and then reaches below the threshold level to turn off said trigger controlling transistor, and

a charging time constant and a discharging time constant of said trigger power supply capacitor are set to values appropriate for charges required for providing the trigger signal to said thyristor to remain in said trigger power supply capacitor.

6. The capacitor discharge ignition device for an internal combustion engine according to claim 1, further comprising the positive current feedback circuit provided between one end of said exciter coil and the ground in order to construct the return circuit of the current flowing out of said exciter coil when said exciter coil generates the positive half cycle of the output voltage, and the negative current feedback circuit provided between the other end of said exciter coil and the ground in order to construct the return circuit of the current flowing out of said exciter coil when said exciter coil generates the negative half cycle of the output voltage,

wherein said positive current feedback circuit is comprised of the first feedback diode connected between the gate and the cathode of said thyristor with its cathode directed to the gate of said thyristor, and the second feedback diode connected between the gate of said thyristor and one end of said exciter coil with its anode directed to the gate of said thyristor,

said negative current feedback circuit comprises the third feedback diode connected between the other end of said exciter coil and the ground with its anode directed to the ground,

a resistance element is connected in series with said third feedback diode, and a series circuit of said third feedback diode and the resistance element is connected between the other end of said exciter coil and the ground,

a series circuit of a detection switch that is turned on when a state where warning indication is required occurs and a light emitting diode as warning indication means is connected between the other end of said exciter coil and the ground with an anode of said light emitting diode directed to the ground, and

the reverse bias circuit is comprised of said first feedback diode, which

applies the reverse bias voltage between the gate and the cathode of said thyristor when the current flowing from said exciter coil through said thyristor is detected and when the charging current of said ignition capacitor is detected, and said trigger inhibiting circuit is comprised of said reverse bias circuit.

7. The capacitor discharge ignition device for an internal combustion engine according to claim 1, wherein

said trigger inhibiting circuit is comprised of a short circuit that short-circuits said thyristor between the gate and the cathode when the current flowing from said exciter coil through said thyristor is detected and when the charging current of said ignition capacitor is detected.

8. The capacitor discharge ignition device for an internal combustion engine according to claim 1, further comprising the positive current feedback circuit provided between one end of said exciter coil and the ground in order to construct the return circuit of the current flowing out of said exciter coil when said exciter coil generates the positive half cycle of the output voltage, and the negative current feedback circuit provided between the other end of said exciter coil and the ground in order to construct the return circuit of the current flowing out of said exciter coil when said exciter coil generates the negative half cycle of the output voltage,

wherein said positive current feedback circuit is comprised of the first feedback diode connected between the gate and the cathode of said thyristor with its cathode directed to the gate of said thyristor, and the second feedback diode connected between the gate of said thyristor and one end of said exciter coil with its anode directed to the gate of said thyristor,

said negative current feedback circuit comprises the third feedback

diode connected between the other end of said exciter coil and the ground with its anode directed to the ground, and

said trigger inhibiting circuit is comprised of a short-circuiting switch provided so as to short-circuit said thyristor between the gate and the cathode when the thyristor conducts, and a short-circuiting switch drive circuit that causes said short-circuiting switch to conduct when a forward voltage drop occurring across said first feedback diode is detected.

9. The capacitor discharge ignition device for an internal combustion engine according to claim 1, further comprising the positive current feedback circuit provided between one end of said exciter coil and the ground in order to construct the return circuit of the current flowing out of said exciter coil when said exciter coil generates the positive half cycle of the output voltage, and the negative current feedback circuit provided between the other end of said exciter coil and the ground in order to construct the return circuit of the current flowing out of said exciter coil when said exciter coil generates the negative half cycle of the output voltage,

wherein said positive current feedback circuit is comprised of the first feedback diode connected between the gate and the cathode of said thyristor with its cathode directed to the gate of said thyristor, and the second feedback diode connected between the gate of said thyristor and one end of said exciter coil with its anode directed to the gate of said thyristor,

said negative current feedback circuit comprises the third feedback diode connected between the other end of said exciter coil and the ground with its anode directed to the ground, and

said trigger inhibiting circuit is comprised of a first transistor whose collector and emitter are connected to the gate and the cathode of said thyristor, respectively, a second transistor whose collector and emitter are

connected to a base and the emitter of said first transistor and whose base is connected to a cathode of said first feedback diode, and a circuit that provides a base current to said first transistor and second transistor.

10. A capacitor discharge ignition device for an internal combustion engine comprises:

a magneto generator having an exciter coil that generates one-and-a-half cycle of an AC voltage constituted by a positive half cycle of an output voltage and first and second negative half cycles of output voltages generated before and after said positive half cycle of the output voltage, respectively, at least once during one rotation of a crankshaft;

an ignition coil;

an ignition capacitor that is charged with one polarity with the positive half cycle of the output voltage of said exciter coil;

a discharging switch circuit that is comprised so as to have a first thyristor and a second thyristor, and discharge charges stored in said ignition capacitor through a primary coil of said ignition coil when either said first thyristor or said second thyristor is turned on;

a thyristor trigger circuit that is provided so as to operate using the negative half cycle of the output voltage of said exciter coil as a power supply voltage, and provides a trigger signal to either said first thyristor or said second thyristor at an ignition position in said internal combustion engine; and

a trigger inhibiting circuit that inhibits said first thyristor from being triggered when a current flowing from said exciter coil through said thyristor is detected and when a charging current of said ignition capacitor is detected,

wherein said thyristor trigger circuit comprises a first trigger circuit that provides a trigger signal to said first thyristor using said exciter coil as a

signal source while said exciter coil is generating the negative half cycle of the output voltage, and a second trigger circuit that detects a rotational speed of said internal combustion engine from the output of said exciter coil and provides a trigger signal to said second thyristor at an ignition position arithmetically operated with respect to the detected rotational speed.

11. The capacitor discharge ignition device for an internal combustion engine according to claim 10, wherein said trigger inhibiting circuit is comprised of a reverse bias circuit that applies a reverse bias voltage between a gate and a cathode of said first thyristor when the current flowing from said exciter coil through said first thyristor is detected and when the charging current of said ignition capacitor is detected.

12. The capacitor discharge ignition device for an internal combustion engine according to claim 10, further comprising a positive current feedback circuit provided between one end of said exciter coil and the ground in order to construct a return circuit of a current flowing out of said exciter coil when said exciter coil generates the positive half cycle of the output voltage, and a negative current feedback circuit provided between the other end of said exciter coil and the ground in order to construct a return circuit of a current flowing out of said exciter coil when said exciter coil generates the negative half cycle of the output voltage,

wherein said positive current feedback circuit is comprised of a first feedback diode connected between the gate and the cathode of said first thyristor with its cathode directed to the gate of said first thyristor, and a second feedback diode connected between the gate of said first thyristor and one end of said exciter coil with its anode directed to the gate of said thyristor,

said negative current feedback circuit comprises a third feedback diode connected between the other end of said exciter coil and the ground with its anode directed to the ground, and

the reverse bias circuit is comprised of said first feedback diode, which applies the reverse bias voltage between the gate and the cathode of said thyristor when the current flowing from said exciter coil through said thyristor is detected and when the charging current of said ignition capacitor is detected, and said trigger inhibiting circuit is comprised of said reverse bias circuit.

13. The capacitor discharge ignition device for an internal combustion engine according to claim 10, wherein said first trigger circuit is comprised so as to recognize a crank angle position corresponding to a specific phase of the negative half cycle of the output voltage of said exciter coil as an ignition position of said internal combustion engine and provide a trigger signal to said thyristor when said ignition position is detected, and

said second trigger circuit comprises a crank angle detection signal generation circuit that generates a crank angle detection signal when the negative half cycle of the output voltage of said exciter coil reaches a certain value; a power supply circuit that uses the negative half cycle of the output voltage of said exciter coil as an input to output a fixed DC voltage; a microcomputer that is provided so as to operate using said crank angle detection signal as an input and the output voltage of said power supply circuit as a power supply voltage, and constructs rotational speed detection means that uses said crank angle detection signal generated when said first negative half cycle of the output voltage reaches a certain value as a reference signal to detect a rotational speed of said internal combustion engine from a production interval of said reference signal, ignition position arithmetical

operation means that arithmetically operates an ignition position of said internal combustion engine with respect to the rotational speed detected by said rotational speed detection means, and trigger instruction issuing means that issues a trigger instruction when the ignition position arithmetically operated by said ignition position arithmetical operation means is detected; and a trigger signal output circuit that outputs a trigger signal to be provided to said second thyristor when said trigger instruction issuing means issues the trigger instruction.

14. The capacitor discharge ignition device for an internal combustion engine according to claim 10, further comprising a trigger signal bypassing switch provided so as to bypass from said first thyristor the trigger signal provided from said first trigger circuit to said first thyristor in an ON state; and

bypassing switch control means that keeps said trigger signal bypassing switch in an OFF state when the rotational speed of said internal combustion engine is below a set value, and keeps said trigger signal bypassing switch in an ON state when said rotational speed of the internal combustion engine exceeds the set value.

15. The capacitor discharge ignition device for an internal combustion engine according to claim 10, further comprising the positive current feedback circuit provided between one end of said exciter coil and the ground in order to construct the return circuit of the current flowing out of said exciter coil when said exciter coil generates the positive half cycle of the output voltage, and the negative current feedback circuit provided between the other end of said exciter coil and the ground in order to construct the return circuit of the current flowing out of said exciter coil when said exciter

coil generates the negative half cycle of the output voltage,

wherein said positive current feedback circuit is comprised of the first feedback diode connected between the gate and the cathode of said first thyristor with its cathode directed to the gate of said first thyristor, and the second feedback diode connected between the gate of said first thyristor and one end of said exciter coil with its anode directed to the gate of said first thyristor,

said negative current feedback circuit comprises the third feedback diode connected between the other end of said exciter coil and the ground with its anode directed to the ground,

a resistance element is connected in series with said third feedback diode, a series circuit of said third feedback diode and the resistance element is connected between the other end of said exciter coil and the ground,

a series circuit of a detection switch that is turned on when a state where warning indication is required occurs and a light emitting diode as warning indication means is connected between the other end of said exciter coil and the ground with an anode of said light emitting diode directed to the ground, and

the reverse bias circuit is comprised of said first feedback diode, which applies the reverse bias voltage between the gate and the cathode of said thyristor when the current flowing from said exciter coil through said thyristor is detected and when the charging current of said ignition capacitor is detected, and said trigger inhibiting circuit is comprised of said reverse bias circuit.

16. The capacitor discharge ignition device for an internal combustion engine according to claim 10, wherein

said trigger inhibiting circuit is comprised of a short circuit that short-circuits

said first thyristor between the gate and the cathode when the current flowing from said exciter coil through said first thyristor is detected and when the charging current of said ignition capacitor is detected.

17. The capacitor discharge ignition device for an internal combustion engine according to claim 10, further comprising the positive current feedback circuit provided between one end of said exciter coil and the ground in order to construct the return circuit of the current flowing out of said exciter coil when said exciter coil generates the positive half cycle of the output voltage, and the negative current feedback circuit provided between the other end of said exciter coil and the ground in order to construct the return circuit of the current flowing out of said exciter coil when said exciter coil generates the negative half cycle of the output voltage,

wherein said positive current feedback circuit is comprised of the first feedback diode connected between the gate and the cathode of said first thyristor with its cathode directed to the gate of said first thyristor, and the second feedback diode connected between the gate of said first thyristor and one end of said exciter coil with its anode directed to the gate of said first thyristor,

said negative current feedback circuit comprises the third feedback diode connected between the other end of said exciter coil and the ground with its anode directed to the ground,

a resistance element is connected in series with said third feedback diode, a series circuit of said third feedback diode and the resistance element is connected between the other end of said exciter coil and the ground,

a series circuit of a detection switch that is turned on when a state where warning indication is required occurs and a light emitting diode as warning indication means is connected between the other end of said exciter

coil and the ground with an anode of said light emitting diode directed to the ground, and

said trigger inhibiting circuit is comprised of the short circuit that short-circuits said first thyristor between the gate and the cathode when the current flowing from said exciter coil through said first thyristor is detected and when the charging current of said ignition capacitor is detected.